

UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Nigel Paul Schofield  
Serial No.: 10/338,775  
Filed: January 23, 2006  
Entitled: Vacuum Pumping System and Method of Operating a Vacuum Pumping Arrangement  
Dkt. No.: M02B160

Group No.: 3746  
Examiner: n/a

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence and every writing referred to herein as being enclosed is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on April 10, 2006.

(Date)

Betty Lee

Printed name of person signing this certificate

Betty Lee  
Signature of person mailing

Dear Sir:

**REQUEST FOR CORRECTED FILING RECEIPT**

Attached is a copy of the official filing receipt, mailed March 1, 2006, received from the PTO in the above application for which issuance of a corrected filing receipt is respectfully requested.

There is an error with respect to the total number of independent claims. The total number of independent claims is 2, not 1. A copy of the Preliminary Amendment which was filed together with the subject application is attached for your reference.

In addition, there is an error with respect to the Foreign Applications UNITED KINGDOM serial number. The correct foreign application number should read 0229353.8, not 0229253.8.

It is believed that the need for correction is not due to any error by applicant and that no fee is due. However, as a precaution, the Commissioner is hereby authorized to charge to Deposit Account No. 02-2865 any fee which may be required. This letter is submitted in triplicate.

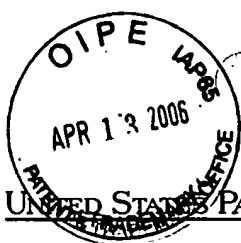
Respectfully submitted,

Date: April 10, 2006  
The BOO Group, Inc.  
Legal Services - Intellectual Property  
575 Mountain Ave.  
Murray Hill, NJ 07974  
Tel: (908) 771-6469

Ira Lee Zebrak  
Ira Lee Zebrak, Esq.  
Attorney for Applicants(s)  
Reg. No. 31,147

Attachments  
Official Filing Receipt  
Preliminary Amendment

ILZ:bjl



RECEIVED Page 1 of 3

MAR - 9 2006

Intellectual Property Dept. *UP 12*

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/536,775	01/23/2006	3746	1030	M02B160	6	17	<i>12</i>

CONFIRMATION NO. 2847

20411  
THE BOC GROUP, INC.  
575 MOUNTAIN AVENUE  
MURRAY HILL, NJ 07974-2064

## FILING RECEIPT



\*OC000000018100018\*

Date Mailed: 03/01/2006

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Nigel Paul Schofield, Horsham, UNITED KINGDOM;

Power of Attorney: The patent practitioners associated with Customer Number 20411.

## Domestic Priority data as claimed by applicant

This application is a 371 of PCT/GB03/05380 12/09/2003

## Foreign Applications

UNITED KINGDOM ~~0229253.8~~ 12/17/2002*0229353.8*

Projected Publication Date: 06/01/2006

Non-Publication Request: No

Early Publication Request: No

## Title

Vacuum pumping system and method of operating a vacuum pumping arrangement

## Preliminary Class

## PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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International Application No.  
PCT/GB2003/005380

National Stage  
Preliminary Amendment

**EXPRESS MAIL MAILING LABEL: ER 224689656 US**



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**In re patent application of:** Nigel Paul Schofield

**Attorney Docket No.:** M02B160

**International Application No.** PCT/GB2003/005380

**Group Art Unit:**

**International Application Filing Date:** December 9, 2003

**National Application Filed:** Concurrently Herewith

**Title:** Vacuum Pumping System and Method of Operating a Vacuum Pumping Arrangement

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

**PRELIMINARY AMENDMENT**

**37 C.F.R. § 1.115**

Dear Sir:

Prior to examining the above-identified application, please amend the above-identified application as follows:

**IN THE SPECIFICATION**

Please amend page 1 by inserting the following heading between the title of the invention and the first paragraph:

**“FIELD OF THE INVENTION”**

Please amend page 1 by inserting the following heading between the first and second paragraphs:

**“BACKGROUND OF THE INVENTION”**

Please amend page 3 by inserting the following heading after line 4 and before line 5:

**“BRIEF SUMMARY OF THE INVENTION”**

Please amend page 4 by inserting the following heading after line 3 and before line 4:

**“BRIEF DESCRIPTION OF THE DRAWINGS”**

Please amend page 4 by inserting the following heading after line 13 and before line 14:

**“DETAILED DESCRIPTION OF THE INVENTION”**

Please amend page 15 by inserting the following language between the “CLAIMS” heading and claim 1:

**“I claim:”**

**IN THE CLAIMS**

1. (currently amended) A vacuum pumping system ~~comprising~~ having a vacuum pumping arrangement comprising:
  - a drive shaft;
  - a motor for driving ~~said~~the drive shaft;
  - a molecular pumping mechanism comprising turbomolecular pumping means; ~~and~~
  - a backing pumping mechanism, wherein ~~said~~the drive shaft is for driving ~~said~~the molecular pumping mechanism and ~~said~~the backing pumping mechanism; and
  - ~~the system comprises~~ evacuation means for evacuating at least ~~said~~the turbomolecular pumping means.
2. (currently amended) ~~A~~The system as claimed in claim 1, wherein the vacuum pumping arrangement forms part of a semiconductor processing assembly and ~~said~~the evacuation means comprises a pump associated with ~~said~~the semiconductor processing assembly.
3. (currently amended) ~~A~~The system as claimed in claim 2, wherein ~~said~~the pump is a pump for a load lock chamber of the semiconductor processing assembly.
4. (currently amended) ~~The~~A system as claimed in claim 1, wherein ~~said~~the evacuation means comprises an ejector pump.
5. (currently amended) ~~The~~A system as claimed in ~~any one of claims 1 to 4~~, wherein the backing pumping mechanism comprises a regenerative pumping mechanism.
6. (currently amended) ~~The~~A system as claimed in ~~any one of the preceding claims 1~~, wherein ~~said~~the molecular pumping mechanism comprises molecular drag pumping ~~means~~mechanism.
7. (currently amended) ~~The~~A system as claimed in ~~any one of the preceding claims 1~~, wherein ~~said~~the evacuation means is for evacuating the vacuum pumping arrangement.

8. (currently amended) A method of operating a vacuum pumping arrangement ~~comprising~~having a drive shaft; a motor for driving ~~said~~the drive shaft; a molecular pumping mechanism ~~comprising~~having turbomolecular pumping means; and a backing pumping mechanism, ~~wherein said~~the drive shaft ~~being~~is for driving ~~said~~the molecular pumping mechanism and ~~said~~the backing pumping mechanism, the method comprising the steps of operating an evacuation means connected to the arrangement to evacuate ~~at least the~~ turbomolecular pumping means to a predetermined pressure; and operating the motor to start rotation of the drive shaft.

9. (currently amended) ~~The~~A method as claimed in claim 8, wherein the motor is ~~operated to start rotation of~~rotates the drive shaft when ~~said~~the predetermined pressure has been attained.

10. (currently amended) ~~The~~A method as claimed in claim 8, ~~wherein the method comprises~~further comprising the steps of starting the motor before or during ~~evacuating~~ evacuation of ~~said at least the~~ turbomolecular pumping means to ~~said~~the predetermined pressure; ~~and limiting the torque of the motor to prevent overloading before evacuation; and the step of operating the evacuation means to evacuate at least the turbomolecular pumping means to said~~the predetermined pressure.

11. (currently amended) ~~The~~A method as claimed in ~~any one of claims 8 to 10~~, wherein the vacuum pumping arrangement forms part of a semiconductor processing assembly having a pump associated therewith which forms ~~said~~the evacuation means, ~~and the method comprises~~further comprising the steps of connecting the pump to the arrangement and operating the pump to evacuate at least the turbomolecular pumping means to ~~said~~the predetermined pressure.

12. (currently amended) ~~The~~A method as claimed in ~~any one of claims 8 to 10~~, wherein the evacuation means comprises an ejector pump ~~and the method comprises~~further comprising the steps of connecting ~~said~~the ejector pump to the arrangement; and operating the ejector pump to evacuate at least the turbomolecular pumping means to ~~said~~the predetermined pressure.



13. (currently amended) TheA method as claimed in ~~any one of claims 8 to 12~~, wherein ~~said~~the vacuum pumping arrangement is evacuated to ~~said~~the predetermined pressure.

14. (currently amended) TheA method as claimed in ~~any one of claims 8 to 13~~, wherein ~~said~~the predetermined pressure is 500 mbar or less.

15. (new) The system as claimed in claim 5, wherein the molecular pumping mechanism comprises molecular drag pumping mechanism.

16. (new) The system as claimed in claim 4, wherein the evacuation means is for evacuating the vacuum pumping arrangement.

17. (new) The method as claimed in claim 13, wherein the predetermined pressure is 500 mbar or less.

REMARKS

This application is being filed concurrently with the entry of the National Stage (Chapter I) of International Application No. PCT/GB2003/005380 which claims the priority of Great Britain Patent Application No. 0229353.8 under 35 USC 119.

This Preliminary Amendment was considered when calculating the filing fee. Accordingly, the total number of claims specified on the Transmittal Letter is 17 and the number of independent claims is 2.

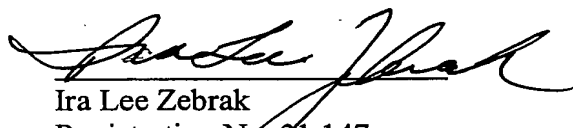
Applicant has amended claims 1-14 to eliminate any multiple dependencies, superfluous language and to change "said" to "the." Applicant has also added new claims 15-17.

Applicant has further amended claim 6 to claim a "molecular drag pumping mechanism." Support for amended claim 6 is on page 4 lines 21-23, page 5 lines 1-2, page 11 lines 3-5 and Figure 1 of the Specification as filed. Accordingly, no new matter has been introduced.

It is not believed at this time that any additional fee is due. As a precaution, the Commissioner is hereby authorized to charge to Deposit Account No. 02-2865 any additional fee required by this submission.

Respectfully submitted,

The BOC Group, Inc.  
Legal Services-Intellectual Property  
575 Mountain Avenue  
Murray Hill, NJ 07974  
Phone: 908-771-6469  
Fax: 908-771-6159

  
Ira Lee Zebrak  
Registration No. 31,147  
Attorney for Applicant(s)  
Date: May 26, 2008